ENVIRONMENTAL
Fact Sheet

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

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Asbestos Management Facts for Contractors

General

Asbestos is naturally occurring mineral which, when mined and reduced to a state of microscopic sized fibers for processing, has been commercially utilized in the manufacture of a variety of familiar products. Based on the results of a number of health studies, it is now recognized that asbestos can endanger human health. The inhalation of asbestos fibers is known to cause a debilitating and irreversible respiratory illness known as asbestosis, as well as lung cancer and mesothelioma cancer. The latency period associated with these diseases can involve several decades.

Because inhalation is the exposure route of concern, it is important to prevent asbestos fibers from becoming airborne, being directly contacted, or entering surface waterways for deposit at remote locations. Proper control of these issues is the underlying objective in properly handling any asbestos containing material.

As of October 1, 1995 the Occupational Safety and Health Administration (OSHA) regulations as defined in 29 CFR 1926.1101 require a competent person to supervise all asbestos removal jobs. Negative initial exposure assessments must be performed by an OSHA competent person if employees, trained in compliance with 29 CFR 1926.1101, are to perform asbestos removal projects without respiratory protection. This applies but is not limited to work such as: asbestos floor tile work, asbestos siding work, asbestos roofing work, and asbestos shingles and wall board work.

Attached is an informational sheet of Applicable, Relevant, Appropriate Regulations (ARARs) which may apply in part or whole to planned asbestos related projects to be performed in the State of N.H.

Asbestos In Homes and Buildings

The State of New Hampshire considers asbestos waste as a solid waste requiring special handling, which coincides with federal policy. The impact on homeowners and land owners in New Hampshire today is that property which contains any type of asbestos is deemed by public sentiment to have certain liabilities. An estimated 80% of all buildings constructed before 1978 contain asbestos materials. Asbestos can be found in the following materials which are listed merely as examples of asbestos containing materials. The list should not be construed as being all inclusive.

siding	ceiling tiles	floor tiles
roofing materials	spray applied insulation	mastic/adhesives
pipe insulation	linoleum	plaster

Definitions of Asbestos Containing Material (ACM)

Friable ACM means any material which contains more than 1% asbestos and can be crumbled, pulverized, or reduced to powder by hand pressure.

Non-friable ACM means any material which contains more than 1% asbestos and can not be pulverized under hand pressure. Non-friable ACM is divided into two categories. Category I includes packings, gaskets, resilient floor covering, and asphalt roofing products. Category II is any non-friable ACM not included in Category I.

Regulated asbestos containing material (RACM) includes the following:

a. friable asbestos material;
b. Category I non-friable ACM that has become friable;
c. Category I non-friable ACM that will be, or has been, subjected to sanding, grinding, cutting, or abrading; and,
d. Category II non-friable ACM that has a high probability of becoming, or has become, crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Specific Guidance for Contractors

With one exception, RACM can only be removed by a licensed asbestos abatement contractor. The one exception to this is an individual homeowner with no tenants doing work on his own private single family home. Removal of non-regulated asbestos materials can be legally performed by homeowners, regular contractors, and licensed asbestos abatement contractors as long as each does not violate the National Emissions Standards for Hazardous Air Pollutants (NESHAP), which in laymen's terms, means no visible emissions, and the work complies with the Occupational Safety and Health Administration's (OSHA) regulations delineated in 29 CFR 1926.1101. When conducting remediation projects, one must be especially careful **not** to allow employees to:

1. throw asbestos waste material onto hard surfaces where the material will fracture and release fibers;
2. utilize techniques such as hammering, sanding, grinding or drilling, which can render non-friable asbestos materials friable;
3. remove floor tile using methods which require mechanical chipping or grinding if the tile or the adhesive or mastic contains asbestos fibers; or
4. follow work-practice or technique which will create an environment where the binder asbestos materials is disturbed, fractured, or powdered because such action will create a situation where fibers will be unlocked and released as airborne particles.

All asbestos removal projects whether they involve RACM or non regulated asbestos require the project to be supervised by a competent person as defined in 29 CFR 1926.1101.

Handling Tips

The New Hampshire Department of Environmental Services (Department) using experience gained during a number of remediation projects has developed the following suggestions which we hope will be of use in project implementation:

1. Devise a means of handling and removing non-friable asbestos material to control the release of fibers and keep breakage to minimum.
2. Mist the materials being removed with a water spray to prevent fibers from becoming airborne. To enhance the effectiveness of the spray, the water should be treated with a chemical wetting agent.
3. Use plastic or polyethylene (some type of synthetic membrane) to collect errant pieces of material dislodged during removal. Example - plastic sheeting around perimeter of house during siding removal.
4. Package the asbestos waste material as soon as possible and do not leave it unattended or open to the public.
5. Wear a disposable tyvek suit, gloves, and a half mask respirator with High Efficiency Particulate Air (HEPA) filters while removing, packaging, and disposing of the asbestos waste material. It should be noted that it is required to seek a medical opinion before wearing a respirator which places an additional strain on the heart and lungs.
6. Generate a Waste Shipment Record (WSR). This information/form is required prior to disposal at a facility permitted for that purpose. The Department has a Fact Sheet (ASB-14) which explains and provides a copy of a sample WSR. Copies of the completed form should be given to the property owner/landfill attendant, and contractor.
7. All transporters/haulers must be certain that all loads are secured prior to transport. There is a one pound reportable spill quantity for friable asbestos which requires not only cleaning up the spill but also notifying both the National Response Center (NRC) at 1-800-424-8802 and the New Hampshire Department of Safety (DOS) at 1-800-346-4009. For further information regarding transportation and packaging regulations see Fact Sheet ASB-13.

Insulation Heating contractors should take note that the guidelines for removing RACM from heating systems are included in the N.H. Revised Statutes Annotated (RSA) Chapter 141-E. The removal or repair of RACM from workplaces, schools, public facilities, and dwellings (multiple - non private) must be performed by a licensed asbestos abatement contractor. Because this requirement also applies to certain types of ceiling tiles which contain asbestos, general contractors should also take notice. Special exceptions during emergencies allow for owner participation in the removal process. Plastic wrapping of the asbestos allows for isolation of the fibers, basically encapsulating them, while repairs are made or a replacement unit installed.

Replacing and Removing Pipe

Special consideration should be given to situations involving the replacement/removal of transite asbestos pipe and other asbestos piping systems in the ground, above the ground and under bridges. If the pipe is not removed, but a replacement line is run nearby or parallel to the asbestos pipe, the location of the original pipe should be marked on an as-built drawing of the site. Copies should be sent to the New Hampshire Department of Environmental Services, Waste Management Division and to the local code enforcement officer. Future land use and other construction projects may be affected.

Pipe removal projects require the supervision of a competent person and must be performed in accordance with the New Hampshire Solid Waste Rules. Pipe to be removed should not be

uprooted by blasting. If sections must be cut in the field to facilitate removal, wetting techniques must be employed. Dry cutting with a portable radial saw (radial) should be avoided. Pipe to be discarded must be packaged in leak tight containers or sealed in double layers of 6 mil thick plastic and disposed of at a permitted landfill. Care should be expended to reduce the amount of breakage during removal since fracturing causes fiber release. Any pipe crushed and left in place must be located on an as-built drawing.

Removing Pavement

For projects involving the removal of hot bituminous bridge pavement installed under Department of Transportation State specification #403.911 (generally during the 1970s), special precautions are necessary. The Department has a special Fact Sheet (ASB-10) which covers safety guidelines/requirements to be followed during removal of such pavement. The guidelines/requirements also apply to all types of asphalt curbing and bumpers containing more than 1% of asbestos by weight.

Removing Floor Coverings

Based on the (Nov. 20, 1990) repromulgated NESHAP, the removal of category I non-friable resilient asbestos containing floor coverings is regulated as follows:

1. The removal of category I non-friable resilient asbestos containing floor coverings does not have to be performed by a licensed asbestos abatement contractor as long as the following conditions are met:
    a. The removal is performed in a manner which does not invoke the NESHAP (see #2 below), and complies with OSHA regulations delineated in 29 CFR 1926.1101.
    b. The removed material is immediately and properly packaged in leak tight labeled containers for disposal.
    c. The workers performing removal tasks wear at a minimum respiratory protection, protective clothing, and gloves.
    d. The removed asbestos material and contaminated protective equipment is disposed of at a facility which is permitted to accept that type of asbestos waste.
2. Approved removal methodologies which will not invoke the NESHAP, by allowing the tiles to be removed with a minimum of damage to the tiles, are as follows:
    a. Use of heat from heat guns or electric heat machines;
    b. Use of infrared machines;
    c. Flooding with water or amended water;
    d. Use of dry ice or liquid nitrogen.
3. Removal techniques which result in severely damaging or fragmenting the asbestos material are unacceptable due to the potential for uncontrolled fiber release. Examples of this would include, but not be limited to, the following activities:
    a. mechanical chipping
    b. sanding
    c. grinding
    d. abrading
4. Finally, it should be emphasized that some of the mastics used to adhere the resilient flooring coverings to the sub-floor contain asbestos. Therefore, mastic removal techniques must be carefully performed in accordance with approved techniques as outlined above.

Underground Storage Tanks Removals

Registered, unregistered, leaking, abandoned and previously unknown underground storage tanks often had insulated supply and return lines connecting them to a facility, pumphouse, or product line. Approval from the Department must be obtained prior to starting tank removal projects. If the tank is to be made vapor free and closed in place an as-built drawing should be generated showing the presence of the asbestos on the underground supply lines. A copy of this drawing must be sent to the Department.

Other Projects Requiring Special Attention

1. Asbestos wrapped cable in underground trenches.
2. Asphaltic asbestos roofing.
3. Solid asbestos roofing.
4. Asphaltic asbestos siding.
5. Solid asbestos siding.
6. Asbestos/lead paint.

Further Information

For additional information, contact:

N.H. Department of Environmental Services
Waste Management Division
29 Hazen Drive
Concord, NH 03301 603-271-2925

State of New Hampshire Applicable, Relevant, Appropriate Regulations (ARARs) for Asbestos Remediations

Following is a list of State of NH requirements that apply to asbestos abatement in general. (Note: We suggest you contact each of the agencies for further information regarding their rules and application thereof.)

a. NH RSA Ch. 141-E (Asbestos Management and Control Act)
b. NH RSA Ch. 149-M (Solid Waste Management Act)
c. NH RSA Ch. 147-A (Hazardous Waste Management Act)
d. NH Admin. Rules Ch. He-P 5000 (Asbestos Management Rules) Contact: New Hampshire Division of Public Health Services, 603-271-4609
e. NH Admin. Rules (Solid Waste Rules) Contact: New Hampshire Department of Environmental Services (Department), Waste Management Division 603-271-2925.
f. NH Admin. Rules Ch. Env-C 400 (Asbestos Management and Control) Contact: Department Air Resources Division 603-271-1370.
g. NH Admin. Rules Ch. Env-Wt 100-800 (Wetlands Board Rules) Contact: Department Water Supply and Pollution Control Division 603-271-2147

With the exception of the Wetlands Board Rules, the other State of NH regulations cover the standard asbestos type regulatory requirements including, but not limited to, notification of abatement, air monitoring, personal protection, decontamination of personnel and equipment, and cover criteria.

According to the Water Quality Engineering Section of the Water Supply and Pollution Control Division of the New Hampshire Department of Environmental Services that a significant alteration of terrain permit is not required if the amount of surface cover being disturbed in the area does not equal or exceed 100,000 sq. ft.

Representatives of the Wetlands Board indicated a permit would have to be obtained if abatement activities or structure, including the actual site cap, would disturb wetlands areas.

The regulations can be obtained either through the Department's Public Information and Permitting Office (603-271-2975), the Department of Public Health Services' Risk Assessment Bureau (603-271-4609).

SITE SAFETY AND CONTINGENCY PLANS SUMMARY

General

Site Safety and Contingency Plans (SSACP) must be submitted to the Solid Waste Compliance Section (SWCS) for review prior to remediation of asbestos contaminated properties or outdoor asbestos renovation/demolition/remediation projects. The SSACP, after being reviewed by the SWCS of the Waste Management Division, should be required reading for all personnel connected with the Abatement Activities, and should be posted at the job site. Emergency telephone numbers should be listed for the job and also posted at the site. These should include, but not be limited to, the local Fire Department, Ambulance Service, Property Owner, Contractors Home Number, and the nearest Hospital.

Minimum Requirements

a. Clear description of the project to be undertaken. Description should include location, amount and type/types of asbestos material to be dealt with, and any site specific conditions.
b. Who will be doing the work? Is the contractor licensed or unlicensed, or is the property owner of record doing the work? Who is the OSHA competent person designated for the job. A licensed abatement contractor must have up to date credentials.A competent person must have current training certificates as well as an up to date supervisor's certificate.
c. How will the abatement workers be protected? Is air monitoring required? If so, are both area and personal sampling plans needed? Is an on site decontamination facility required, or can multiple asbestos resistant work suits be used. Has there been a negative initial exposure assessment performed.
d. What provisions are made for crowd control? Can sidewalk superintendents be kept at a safe distance from the work site? Is site security necessary?
e. How is the asbestos waste going to be handled and where is it going? If asbestos materials are to be capped on site, then as-built drawings will be required. If the wastes are going to a landfill, is it a facility permitted to accept asbestos waste? If the asbestos wastes are to disposed outside of the State of N.H., then documentation indicating that it is going to a landfill permitted for that purpose will have to be sent to the Department. Copies of the current operating license and the portion of the operating permit that indicates that the particular type/types of asbestos to be disposed are a waste permitted at that specific facility must be sent to the Department.
f. What will be required for a successful conclusion to the job? Specific information should be furnished detailing the conditions of job approval. This might include, but not be

limited to, on site inspection by multiple parties, documentation-test results, as-built drawings, record drawings, landfill receipts, waste shipment records.

g. SSACP are logged in and after review abatement activities are allowed to commencement. At the conclusion of the abatement activities submission of air monitoring data, landfill records, and waste shipment records must be sent to the Department to complete the current project file.